

1775 2818

PTO/SB/21 (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number 10/033,323

Filing Date 08/28/2001

First Named Inventor Rueckes, et al.

Group Art Unit 2818

Examiner Name Unknown

Total Number of Pages in This Submission

Attorney Docket Number 112020.127/NAN-4

ENCLOSURES (check all that apply)

- ☐ Fee Transmittal Form
- ☐ Fee Attached
- ☐ Amendment / Reply
- ☐ After Final
- ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☒ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Response to Missing Parts/ Incomplete Application
- ☐ Response to Missing Parts under 37 CFR 1.52 or 1.53

- ☐ Assignment Papers (for an Application)
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____

- ☐ After Allowance Communication to Group
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
- ☐ Proprietary Information
- ☐ Status Letter
- ☒ Other Enclosure(s) (please identify below):
 - Postcard

Remarks

1. Form PTO-1449 (3 pages)
2. Copies of 59 publications

RECEIVED
AUG 29 2003
TC 2800 MAIL ROOM

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm
or
Individual name

Emily R. Whelan

Signature

Emily R Whelan #59,391

Date

07/28/2003

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, DC 20231 on this date: 07/28/2003

Typed or printed name

Tina M. Dougal

Signature

Tina M. Dougal

Date

07/28/2003

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



PATENT

RECEIVED
AUG. 01 2003
GROUP 1700

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Rueckes, et al.

Serial No.: 10/033,323

Examiner: Unknown

Filed: December 28, 2001

Group Art Unit: 2818

For: ELECTROMECHANICAL THREE-TRACE JUNCTION DEVICES

Attorney Docket No. 112020.127 / NAN-4

CERTIFICATE OF MAILING UNDER 37 C.F.R. 1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date set forth below.

July 28, 2003
Date

Tina M. Dougal
Tina M. Dougal

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. §§ 1.56 and 1.97-98, Applicants bring to the attention of the Examiner the following publications listed on the attached Form PTO-1449.

This submission does not represent that a search has been made or that no better art exists and does not constitute "prior art". Applicants reserve the right to take appropriate action to establish the patentability of the disclosed invention over the listed publications, should one or more of the publications be applied against the claims of the present application.

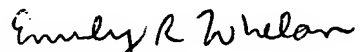
RECEIVED
AUG 29 2003
TC-2800 MAIL ROOM

Copies of the publications listed on the attached Form PTO-1449 are submitted herewith. It is respectfully requested that the Examiner initial and return a copy of the enclosed Form PTO-1449 with the next Patent Office communication.

It is Applicants' belief that that this Information Disclosure Statement is being filed prior to the mailing of the first Office Action on the merits and is therefore submitted as both timely and proper; thus, no fees are believed to be due. However, in the event of a fee deficiency, the Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 08-0219.

Respectfully submitted,

Dated: July 28, 2003



Emily R. Whelan
Registration No. 50,391
Attorney for Applicants

Hale and Dorr LLP
60 State Street
Boston, Massachusetts 02109
Tel: (617) 526-6567
Fax: (617) 526-5000



Subt. For, PTO-1449				Docket Number 112020.127/NAN-4		Application Number 10/033,323	
INFORMATION DISCLOSURE IN AN APPLICATION (Use several sheets if necessary)				Applicant Ruekes, et al.			
				Filing Date December 28, 2001		Group Art Unit 2818	
Sheet	1	OF	3				

U.S. Patent Documents						
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	2001/0004979	06/28/01	Han et al.	216	4	
	2002/0125805	09/12/2002	Hsu	313	309	
	2002/0130353	09/19/02	Lieber et al.	257	315	
	2002/0160111	10/31/02	Sun et al.	427	248.1	
	2002/0172639	11/12/02	Horiuchi	423	477.2	
	2002/0173083	11/21/02	Avouris et al.	438	129	
	2002/0175323	11/28/02	Guillom et al.	257	10	
	2002/0175390	11/28/02	Goldstein et al	257	481	
	2002/0179434	12/5/02	Dai et al.	204	242	
	5,973,444	10/26/99	Xu et al.	313	309	
	6,128,214	10/3/00	Keukes et al.	365	151	
	6,159,620	12/12/00	Heath et al.	428	615	
	6,187,823	02/13/01	Haddon et al.	516	32	

Foreign Patent Documents							
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	WO 01/44796	6/21/01	PCT				
	WO 00/73204	12/07/2000	PCT				
	WO 00/63115	10/26/2000	PCT				

Other Documents (Including Author, Title, Date Pertinent Pages, Etc.)		
A1	Kong, J., et al., "Chemical Vapor Disposition of Methane for Single-Walled Carbon Nanotubes." <i>Chemical Physics Letters</i> , 292, 567, 1998.	
A2	Li, Y., et al., "Growth of Single-Walled Carbon Nanotubes from Discrete Catalytic Nanoparticles of Various Sizes." <i>The Journal of Physical Chemistry B</i> (2001); 105, 11424.	
A3	Dai, Hongjie. "Controlled Chemical Routes to Nanotube Architectures, Physics, and Devices." <i>The Journal of Physical Chemistry B</i> (1999); 103: 11246-11255.	
A4	Colomer, J.-F., at al., "Characterization of Single-Walled Carbon Nanotubes Produced by CCVD Method." <i>Chemical Physics Letters</i> (2001); 345, 11-17.	
A5	Li, Y. et al., "Preparation of Monodispersed Fe-Mo Nanoparticles as the Catalyst for CVD Synthesis of Carbon Nanotubes." <i>Chem. Mater.</i> , 12. 1008, 2001.	
A6	Cassell, A., et al., "Large Scale Synthesis of Single-Walled Carbon Nanotubes." <i>The Journal of</i>	

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if citation is considered, whether or not citation is in conformance with MPEP § 609: Draw Line through citation if not conformance and not considered. Include copy with next communication to applicant.	

Subt. For, PTO-1449

**INFORMATION DISCLOSURE
IN AN APPLICATION**

(Use several sheets if necessary)

Sheet 2 OF 3

Docket Number
112020.127/NAN-4

Application Number
10/033,323

Applicant
Ruekes, et al.

Filing Date
December 28, 2001

Group Art Unit
02818

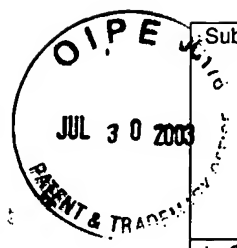
RECEIVED
AUG 01 2003
GROUP 1700

Physical Chemistry B (1999); Vol. 103, No. 22: 6484-6492.

U.S. Patent Documents							
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
	6,198,655	03/6/01	Heath et al.	365	151		
	6,232,706	05/15/01	Dai et al.	313	309		
	6,250,984	06/21/01	Jin et al.	445	51		
	6,322,713	11/27/01	Choi et al.	216	38		
	6,350,488	02/26/02	Lee et al.	427	249.1		
	6,407,443	06/18/02	Chen et al.	257	616		
	6,413,487	07/02/02	Resasco et al.	423	447.3		
	6,432,740	08/13/02	Chen	438	99		
	6,495,116	12/17/02	Herman	423	447.3		
	6,515,339	02/04/03	Shin et al.	257	368		
	6,518,156	02/11/03	Chen et al.	438	597		
	6,566,983	05/20/03	Shin	333	193		
	6,574,130	06/03/03	Segal et al.	365	129		
Foreign Patent Documents							
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	WO 01/03208	1/11/01	PCT				
	EP 1,096,533	95/02/01	Europe				

Other Documents (Including Author, Title, Date Pertinent Pages, Etc.)		
A7	Cassell, A., et al., "Directed Growth of Free-Standing Single-Walled Carbon Nanotubes." <i>Journal of the American Chemical Society</i> (1999); Vol. 121, 7975-7976.	
A8	Delzeit, L., et al., "Multilayered Metal Catalysts for Controlling the Density of Single-walled Carbon Nanotube Growth." <i>Chemical Physics Letters</i> , 348, 368, 2001.	
A9	Wei, Y., et al., "Effect of Catalyst Film Thickness on Carbon Nanotube Growth by Selective Area Chemical Vapor Deposition." <i>Applied Physics Letters</i> (2001); Vol. 78, pgs. 1394-1396.	
A10	Su., M., et al., "A Scalable CVD Method for the Synthesis of Single-Walled Carbon Nanotubes with High Catalyst Productivity." <i>Chemical Physics Letters</i> (2000); Vol. 322, 231-326.	
A11	Harutyunyan, A., et al., "CVD Synthesis of Single Wall Carbon Nanotubes under 'Soft' Conditions." <i>Nano Letters</i> Vol. 2c no 5 525 (2002); Published on web 3/27/02	
A12	Li, Q., et al., "High-Density Growth of Single-Wall Carbon Nanotubes on Silicon by Fabrication of Nanosized Catalyst Thin Films." <i>Chem. Mater.</i> (2002), 14, 4262; Published on web 9/11/02	

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if citation is considered, whether or not citation is in conformance with MPEP § 609: Draw Line through citation if not conformance and not considered. Include copy with next communication to applicant.	



Subt. For, PTO-1449				Docket Number 112020.127/NAN-4	Application Number 10/033,323
INFORMATION DISCLOSURE IN AN APPLICATION (Use several sheets if necessary)				Applicant Ruekes, et al.	
				Filing Date December 28, 2001	Group Art Unit 2818
Sheet	3	OF	3		

RECEIVED
AUG 01 2003
GROUP 1700

A13	Homma, Y., et al., "Growth of Suspended Carbon Nanotube Networks on 100nm-Scale Silicon Pillars." <i>Applied Physics Letters</i> . (2002); Vol. 81 No. 12, 2261-2263.
A14	Javey, A., et al., "Carbon Nanotube Transistor Arrays for Multistage Complementary Logic and Ring Oscillators." <i>Nano Letters</i> (2002); Vol. 2 No. 9 929-932. Published on web 7/31/02
A15	Kong, J., et al., "Syntheses of Individual Single-Walled carbon Nanotubes on Patterned Wafers." <i>Nature</i> (1998); 395: 878-881.
A16	Chen, B., et al., "Heterogeneous Single-Walled Carbon Nanotube Catalyst Discovery and Optimization." <i>Chem. Mater.</i> (2002); Vol. 14 1891-1896.
A17	Yenilmez, E., et al., "Wafer Scale Production of carbon Nanotube Scanning Probe Tips for Atomic Force Microscopy." <i>Applied Physics Letters</i> . (2002); Vol. 80 No. 12, 2225-2227.
A18	Peigney, A., et al., "A Study of the Formation of Single-and-Double-Walled carbon Nanotubes by a CVD Method." <i>The Journal of Physical Chemistry B</i> (2001); 105: 9699-9710.
A19	Franklin, N., et al., "Integration of Suspended Carbon Nanotube Arrays into Electronic Devices and Electrochemical Systems." <i>Applied Physics Letters</i> (2002); Vol. 81 No. 5, 913-905.
A20	Collins, P., et al., "Engineering Carbon Nanotubes and Nanotube Circuits Using Electrical Breakdown." <i>Science</i> (2001); 292: 706-709.
A21	Kim, W., et al., "Synthesis of Ultralong and High Percentage of Semiconduction Single-walled Carbon Nanotubes." <i>Nano Letters</i> (2002); Vol. 2 No. 7 703-708. Published on web 6/01/02
A22	Reuckes, T., et al., "Carbon Nanotube-Based Nonvolatile Random Access Memory for Molecular Computing." <i>Science</i> , vol. 289, 94-97, July 7, 2000
A23	Liu, et al., "Organizing Single-Walled Carbon Nanotubes on Gold Using a Wet Chemical Self-Assembling Technique, <i>Langmuir</i> ," April 18, 2000, Vol. 16, No. 8, 3659-3573
A24	Soh, et al., "Integrated Nanotube Circuits: controlled growth and ohmic contacting of single-walled carbon nanotubes", <i>Applied Physics Letters</i> , August 2, 1999, Vol. 75, No. 5, 627-629
A25	Zheng et al, "Chemical Vapor Deposition Growth of Well-Aligned Carbon Nanotube Patterns on Cubic Mesoporous Silica Films by Soft Lithography", <i>Chemistry of Materials</i> , June 9, 2001, Vol. 13, 2240-2242
A26	Huang, et al., "Patterned Growth of Well-Aligned Carbon Nanotubes: A Soft-Lithographic Approach", <i>The Journal of Physical Chemistry B.</i> , March 16, 2000, Vol. 104, No. 10, 2193-2196
A27	Chattopadhyay, et al., "Metal-Assisted Organization of Shortened Carbon Nanotubes in Monolayer and Multilayer Forest Assemblies", <i>Journal of the American Chemical Society</i> , August 28, 2001, Vol. 123, 9451-9452

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if citation is considered, whether or not citation is in conformance with MPEP § 609: Draw Line through citation if not conformance and not considered. Include copy with next communication to applicant.	

RECEIVED
AUG 29 2003
TC 2800 MAIL ROOM